APPROVED JURISDICTIONAL DETERMINATION FORM U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): March 12, 2008 B. DISTRICT OFFICE, FILE NAME, AND NUMBER: St. Louis District, Wildwood Town Center, MVS-2007-617-001-

SNR_unnamed tributary C. PROJECT LOCATION AND BACKGROUND INFORMATION: State: Missouri County/parish/borough: St. Louis County City: Wildwood Center coordinates of site (lat/long in degree decimal format): Lat. 38:58 ° N, Long. -90:62:9° W. Universal Transverse Mercator: 15 North Name of nearest waterbody: Caulks Creek Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Missouri River Name of watershed or Hydrologic Unit Code (HUC): Lower Missouri (10300200) Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request. Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form. D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY): Office (Desk) Determination. Date: March 5, 2008. Reviewed data provided by applicant Field Determination. Date(s): SECTION II: SUMMARY OF FINDINGS A. RHA SECTION 10 DETERMINATION OF JURISDICTION. There Are no "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required] Waters subject to the ebb and flow of the tide. Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain: B. CWA SECTION 404 DETERMINATION OF JURISDICTION. There Are "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required] 1. Waters of the U.S. a. Indicate presence of waters of U.S. in review area (check all that apply): ¹ TNWs, including territorial seas Wetlands adjacent to TNWs Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs Non-RPWs that flow directly or indirectly into TNWs Wetlands directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs Impoundments of jurisdictional waters Isolated (interstate or intrastate) waters, including isolated wetlands b. Identify (estimate) size of waters of the U.S. in the review area: Non-wetland waters: 130 linear feet: 3-5 width (ft) and/or 0.02 acres. Wetlands: acres in total. c. Limits (boundaries) of jurisdiction based on: Established by OHWM. Elevation of established OHWM (if known):

^{2.} Non-regulated waters/wetlands (check if applicable):³

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.
² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

Supporting documentation is presented in Section III.F.

Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional
Explain:.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:

Watershed size: **Pick List** Drainage area: 42 **acres**

Average annual rainfall: 42.1 inches Average annual snowfall: 9 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

Tributary flows directly into TNW.

Tributary flows through 4 tributaries before entering TNW.

Project waters are 10-15 river miles from TNW.

Project waters are 1-2 river miles from RPW.

Project waters are 5-10 aerial (straight) miles from TNW.

Project waters are 1-2 aerial (straight) miles from RPW.

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

Project waters cross or serve as state boundaries. Explain:
Identify flow route to TNW⁵: The unnamed tributary flows into another on-site channel that originates within the Corsair Homes development (labeled as MVS-2008-56-00-SNR_Tributary A), which is one of the branches that forms the headwaters of Caulks Creek. Approximately 1.6 river miles downstream from the site Caulks Creek becomes a

headwaters of Caulks Creek. Approximately 1.6 river miles downstream from the site, Caulks Creek becomes a Relatively Permanent Water. Caulks Creek flows through St. Louis County an additional 7.25 miles prior to joining waters from the Bonhomme Creek watershed. From this point, the waters flow approximately 2.32 miles prior to reaching the Missouri River. Missouri River is a Section 10 Navigable Water.

Tributary stream order, if known: First Order.

(b)	General Tributary Characteristics (check all that apply): Tributary is: ☐ Artificial (man-made). Explain: ☐ Manipulated (man-altered). Explain:.	
	Tributary properties with respect to top of bank (estimate): Average width: 3 - 5 feet Average depth: 2 - 4 feet Average side slopes: Vertical (1:1 or less).	
	Primary tributary substrate composition (check all that apply): Silts Sands Concrete Cobbles Gravel Muck Bedrock Vegetation. Type/% cover: Other. Explain:	
	Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: The tributary enter of from a dry detention basin. The discharge point has been stabilized with riprap, and the channel de conditions below the discharge point. Presence of run/riffle/pool complexes. Explain: No riffles or pools are present Tributary geometry: Meandering Tributary gradient (approximate average slope): 2%	
(c) an ephemeral	Flow: Tributary provides for: Ephemeral flow Estimate average number of flow events in review area/year: 20 (or greater) Describe flow regime: This channel is supplied hydrology from the upstream dry detention because. Other information on duration and volume:	oasin. It was considere
	Surface flow is: Discrete and confined. Characteristics: Surface flow within this channel.	
	Subsurface flow: Unknown. Explain findings:	
	Tributary has (check all that apply): Bed and banks OHWM ⁶ (check all indicators that apply): clear, natural line impressed on the bank changes in the character of soil shelving vegetation matted down, bent, or absent leaf litter disturbed or washed away sediment deposition water staining other (list): Discontinuous OHWM. Explain:	vents
	If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check High Tide Line indicated by: Mean High Water Mark indicated by: oil or scum line along shore objects survey to available datum; fine shell or debris deposits (foreshore) physical markings;	κ all that apply):

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷Ibid.

				physical markings/characteristics tidal gauges other (list):	vegetation lines/changes in vegetation types.
	adjac (iv)	Charles Iden	Explain: Ba detention ba ntify specific ry detention ba logical Char- Riparian codor, measurin Wetland frin Habitat for: Federall Fish/spa Other en	utary (e.g., water color is clear, discolors sed on observations of the photos within asin contains a heavy load of sediments. pollutants, if known: Silt and sediment vbasin. acteristics. Channel supports (check a	dth): Within the site boundary's, the stream channel is enclosed in a
2.	Cha	aract	eristics of w	etlands adjacent to non-TNW that flow	v directly or indirectly into TNW
	(i)		Properties: Wetland Wetland	eteristics: Itland Characteristics: I size: acres I type. Explain: I quality. Explain: ands cross or serve as state boundaries.	Explain:.
		(b)	Flow is: Pic Surface flow Characte Subsurface	w Relationship with Non-TNW: ck List. Explain: w is: Pick List eristics: flow: Unknown. Explain findings: (or other) test performed:	
		(c)	Directly Not dire Disc	ljacency Determination with Non-TNW: abutting ctly abutting crete wetland hydrologic connection. Ex logical connection. Explain: arated by berm/barrier. Explain:	
		(d)	Project wetl Project water Flow is from	Relationship) to TNW ands are Pick List river miles from TNV ers are Pick List aerial (straight) miles for Pick List. proximate location of wetland as within	rom TNW.
	(ii)	Cha	characterist		rown, oil film on surface; water quality; general watershed ants observed.
	(iii	Bio	Riparian bu Vegetation Habitat for:	acteristics. Wetland supports (check affer. Characteristics (type, average widt type/percent cover. Explain: Emergent by Listed species. Explain findings: wn areas. Explain findings:	

	Other environmentally Aquatic/wildlife divers	-sensitive species. Explaints	ain findings: .	
3.	Characteristics of all wetlands adj All wetland(s) being considere Approximately () acres in total	d in the cumulative analy	vsis: Pick List	
	For each wetland, specify the f	ollowing:		
	Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .

Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: The unnamed, non-Relatively Permanent Flow Water (non-RPW) possesses features of an ephemeral tributary with an ordinary high water mark (OHW). At the point where it enters the Wildwood Town Center project, the channel averages appoximately 4 feet at the bed width and approximately 2 feet for the bank height at the upstream end. Features observed supporting clear evidence of flow and an OHW throughout the entire channel include: leaf litter washed away, the destruction of terrestrial vegetation, the presence of litter and debris, the presence of wrack line, and a clear line impressed on the bank. Based on observed characteristics and its location within the Caulks Creek watershed, the unnamed tributary enters the Wildwood Town Center property as a first order stream. While in this property, the channel joins the site's main channel, labeled as MVS-2008-56-001-SNR Tributary A. There is no interruption of flow or hydrologic connectivity between the headwater stream and Caulks Creek. Based on observed conditions, the unnamed tributary has the capacity to carry surface flow hydrology via a discrete and confined channel to the point where Caulks Creek watershed joins Bonhomme Creek, and then out to the Missouri River. It has been determined that the non-RPW maintains hydrologic connectivity to Caulks Creek and the Missouri River, thereby providing a significant nexus between the non-RPW and a TNW. Hydrologic connectivity refers to the flow that transports organic matter and nutrients, energy, and aquatic organisms throughout the system (Freeman et al., 2006). The following outlines how the unnamed non-RPW maintains a significant nexus to Caulks Creek and the Missouri River through its hydrologic connectivity.

It is anticipated that the on-site tributary contributes to the chemical, physical, and biologic make up of Caulks Creek, through its ability to convey sediments and attached nutrients during these pulses. As previously described, the unnamed tributary channels

stormwater received from an adjacent detention basin. The water appeared to contain a heavy level of sediment that was being discharged from the detention basin. Some of this sediment will fall out along the way. However, this small tributary has the capacity to provide a conduit for sending excess levels of silt downstream to Caulks Creek. Excessive sediment loads can alter the downstream channel and cause changes to key physical characteristics such as depth, width, and flow velocity. In addition to physical degradation to stream hydrology, elevated levels of sediment have a negative impact biologically. Turbid waters can be abrasive to fish gills, scour benthic invertebrate habitat, as well as physically smother habitats (http://www.water.ky.gov).

The non-RPW is considered as one of the headwater streams of Caulks Creek. The Caulks Creek watershed is an area of St. Louis County that has experienced, and is continuing to experience rapid changes through development. Currently, the unnamed tributary has the capacity to provide heavy sediment loads to Caulks Creek. Based on these hydrologic connections, it has been determined that the non-RPW maintains a significant nexus to Caulks Creek, and subsequently the Missouri River.

LITERATURE CITED

Freeman, M.C., C.M. Pringle, and C. R. Jackson. 2007. Hydrologic Connectivity and the Contribution of Stream Headwaters to Ecological Integrity at Regional Scales. Journal of the American Water Resources Association 43:5-14.

http://www.water.ky.gov/sw/swmonitor/monitoring/sediment/

2. Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:.

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1.	TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area: TNWs: linear feet width (ft), Or, acres. Wetlands adjacent to TNWs: acres.
2.	RPWs that flow directly or indirectly into TNWs. Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flow seasonally:
	Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet width (ft). Other non-wetland waters: acres. Identify type(s) of waters: .
3.	Non-RPWs ⁸ that flow directly or indirectly into TNWs. ☑ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.
	Provide estimates for jurisdictional waters within the review area (check all that apply): Tributary waters: 130 linear feet 3-5 width (ft). Other non-wetland waters: acres. Identify type(s) of waters: .
4.	Wetlands directly abutting an RPW that flow directly or indirectly into TNWs. Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands. Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:

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⁸See Footnote # 3.

		■ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
		Provide acreage estimates for jurisdictional wetlands in the review area: acres.
	5.	Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs. Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.
		Provide acreage estimates for jurisdictional wetlands in the review area: acres.
	6.	Wetlands abutting to non-RPWs that flow directly or indirectly into TNWs. Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.
		Provide estimates for jurisdictional wetlands in the review area: acres.
	7.	Impoundments of jurisdictional waters. As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional. Demonstrate that impoundment was created from "waters of the U.S.," or Demonstrate that water meets the criteria for one of the categories presented above (1-6), or Demonstrate that water is isolated with a nexus to commerce (see E below).
Е.	DEC SUC	OLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, GRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY CH WATERS (CHECK ALL THAT APPLY): 10 which are or could be used by interstate or foreign travelers for recreational or other purposes. from which fish or shellfish are or could be taken and sold in interstate or foreign commerce. which are or could be used for industrial purposes by industries in interstate commerce. Interstate isolated waters. Explain: Other factors. Explain: Intify water body and summarize rationale supporting determination:
	Pro	vide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet width (ft). Other non-wetland waters: acres.
		Identify type(s) of waters: Wetlands: acres.
F.		N-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY): If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements. Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce. Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR). Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain:

⁹ To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

¹⁰ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

		Other: (explain, if not covered above):
	fact	vide acreage estimates for non-jurisdictional waters in the review area, where the <u>sole</u> potential basis of jurisdiction is the MBR ors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional gment (check all that apply): Non-wetland waters (i.e., rivers, streams): linear feet width (ft). Lakes/ponds: acres. Other non-wetland waters: acres. List type of aquatic resource: Wetlands: acres.
		wide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such adding is required for jurisdiction (check all that apply): Non-wetland waters (i.e., rivers, streams): linear feet, width (ft). Lakes/ponds: acres. Other non-wetland waters: acres. List type of aquatic resource: Wetlands: acres.
SE	CTIC	ON IV: DATA SOURCES.
A.		PORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked
A.		requested, appropriately reference sources below):
Α.		requested, appropriately reference sources below): Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Data sheets prepared/submitted by or on behalf of the applicant/consultant.
Α.		requested, appropriately reference sources below): Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Data sheets prepared/submitted by or on behalf of the applicant/consultant. Office concurs with data sheets/delineation report. Office does not concur with data sheets/delineation report.
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Α.		requested, appropriately reference sources below): Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Data sheets prepared/submitted by or on behalf of the applicant/consultant. Office concurs with data sheets/delineation report. Office does not concur with data sheets/delineation report. Data sheets prepared by the Corps:. Corps navigable waters' study: U.S. Geological Survey Hydrologic Atlas: USGS NHD data.
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A.	and	requested, appropriately reference sources below): Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Data sheets prepared/submitted by or on behalf of the applicant/consultant. Office concurs with data sheets/delineation report. Office does not concur with data sheets/delineation report. Data sheets prepared by the Corps:. Corps navigable waters' study: U.S. Geological Survey Hydrologic Atlas: USGS NHD data. USGS 8 and 12 digit HUC maps. U.S. Geological Survey map(s). Cite scale & quad name: Eureka and Manchester Quads. USDA Natural Resources Conservation Service Soil Survey. Citation: St. Louis County, Missouri National wetlands inventory map(s). Cite name: Eureka and Manchester Quads. State/Local wetland inventory map(s):. FEMA/FIRM maps:
Α.	and	requested, appropriately reference sources below): Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Data sheets prepared/submitted by or on behalf of the applicant/consultant. Office concurs with data sheets/delineation report. Office does not concur with data sheets/delineation report. Data sheets prepared by the Corps:. Corps navigable waters' study: U.S. Geological Survey Hydrologic Atlas: USGS NHD data. USGS 8 and 12 digit HUC maps. U.S. Geological Survey map(s). Cite scale & quad name: Eureka and Manchester Quads. USDA Natural Resources Conservation Service Soil Survey. Citation: St. Louis County, Missouri National wetlands inventory map(s). Cite name: Eureka and Manchester Quads. State/Local wetland inventory map(s): FEMA/FIRM maps: 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929) Photographs: Aerial (Name & Date): 2007 aerial photo prepared by U.S. Army Corps GIS database
Α.	and Management of the second s	requested, appropriately reference sources below): Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Data sheets prepared/submitted by or on behalf of the applicant/consultant. Office concurs with data sheets/delineation report. Office does not concur with data sheets/delineation report. Data sheets prepared by the Corps:. Corps navigable waters' study: U.S. Geological Survey Hydrologic Atlas: USGS NHD data. USGS NHD data. USGS 8 and 12 digit HUC maps. U.S. Geological Survey map(s). Cite scale & quad name: Eureka and Manchester Quads. USDA Natural Resources Conservation Service Soil Survey. Citation: St. Louis County, Missouri National wetlands inventory map(s). Cite name: Eureka and Manchester Quads. State/Local wetland inventory map(s):. FEMA/FIRM maps: 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929) Photographs: Aerial (Name & Date): 2007 aerial photo prepared by U.S. Army Corps GIS database or Other (Name & Date):. Previous determination(s). File no. and date of response letter:
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B. ADDITIONAL COMMENTS TO SUPPORT JD:.